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Journal of the Society of Arts.

FRIDAY, NOVEMBER 15, 1867.

Announcements by the Council.

NOTICE TO MEMBERS.

The One-Hundred-and-Fourteenth Session of the Society will commence on Wednesday next, the 20th instant, when the Opening Address will be delivered by WILLIAM HAWES, Esq., F.G.S., Chairman of the Council.

The following are the dates of the Wednesday evening meetings, the chair being taken at 8 o'clock:—

1867.	November	—	—	20	27	
„	December	4	11	18	—	
1868.	January	—	—	15	22	29
„	February	5	12	19	26	
„	March	4	11	18	25	
„	April	1	—	15	22	29
„	May	6	13	20	27	
„	June	—	—	—	24*	

For the Meetings previous to Christmas, the following arrangements have been made:—

NOVEMBER 20.—Opening Address by WM. HAWES, Esq., F.G.S., Chairman of the Council.

NOVEMBER 27.—"On the Diplomatic and other Conferences held recently in Paris with reference to International Coinage, Weights, and Measures." By LEONE LEVI, Esq., Professor of Commercial Law in King's College, London.

DECEMBER 4.—"On the Relation between Health and Wages." By J. H. STALLARD, Esq., M.D.

DECEMBER 11.—"On Industrial and Scientific Education; with Notes on the Systems pursued, and the Works produced, in Continental Schools, as exemplified in the Paris Exhibition, and Suggestions for the Establishment of Trade Schools in England." By ELLIS A. DAVIDSON, Esq.

DECEMBER 18.—"On the Principles that Govern the Future Development of the Marine Boiler, Engine, and Screw Propeller." By N. P. BURGH, Esq., C.E.

A book of blank Tickets of Admission to the Meetings has been forwarded to each Member, who is privileged to introduce two friends to each Meeting, on their presenting orders signed by him. Additional Tickets will be sent on application.

The first course of Cantor Lectures for the ensuing Session will be on some branch of Chemistry applied to the Arts, by Dr. F. Crace Calvert, F.R.S., and will be delivered in the early part of the Session; the second course will be "On Food," by Dr. Letheby, Medical Officer of Health for the City of London. A third course will be given, the arrangements for which are in progress. Further particulars will be published in the *Journal*. These Lectures are open to Members, each of whom has the privilege of introducing ONE Friend to each Lecture.

Members are reminded that, should any of their friends be willing to join the Society, the opening of the Session is a favourable opportunity for proposing them.

The following Institution has been received into Union since the last announcement:—

Rugby, Evening Classes for Young Women.

* The Annual General Meeting: the Chair will be taken at Four o'clock. No Visitors are admitted to this Meeting.

Proceedings of the Society.

FOOD COMMITTEE.

A meeting of the committee took place on Saturday, the 9th instant, at 10·30. Present—Mr. Benjamin Shaw, in the chair; Sir W. H. Bodkin; Messrs. Harry Chester, Rev. J. G. Fussell, Rev. Douglas Tinling, Edw. Wilson, James Ware, and W. H. Michael.

Messrs. Sorensen and Plahte showed a Norwegian cooking apparatus, of which a description has already appeared in the *Journal*.* The apparatus shown consisted of a stewpan fitting into a box lined with thick felt. A trial was made of the apparatus; a leg of mutton, with vegetables, was placed in the stewpan, boiled for five minutes, and then carefully enclosed in the box, and the lid sealed. When opened, at the expiration of 3½ hours, the whole was found to be perfectly cooked; the temperature of the water being then about 160 degrees Fahrenheit.

Mr. W. Riddle, C.E., attended the committee, and explained a plan for supplying dinners to families ready cooked and hot. He laid before the committee the following statement:—

GENTLEMEN,—To say that a large part of our system of food supply is founded on a cardinal blunder, seems to be to charge the community with a want of common sense, and yet what other conclusion can be come to when we consider how true is Soyer's remark that half the food of the people is wasted, that ten times the necessary fuel is used in its preparation, and that the result is a lamentable failure for want of knowledge and fitness of means and things to the end to be accomplished.

It is especially with regard to the one great meal of the day that the above thoughts apply.

Large classes of the people (apart from the question of money) find great difficulty in providing dinners and getting anything like value for their money. This evil might be vastly ameliorated under a system of commissariat more in accord with economical principles. Take an illustration. In many families, in cities—families of small incomes—the mother is occupied all day in a small shop; she has, besides this, some of her children to attend to, and so at one or two o'clock, in thousands of houses, but meagre fare is seen on the dinner table—out of proportion to the money expended—for it has been ill-spent, and the food ill-cooked. The statement of the special correspondent of the *Daily Telegraph*, that at Glasgow he had a capital dinner of good pea soup, boiled beef, 10oz. potatoes, and pudding—more than he could eat—for, in all, the sum of 5½d., shows what may be done.

It is desirable to lessen the wear and tear of the present system of dinner-getting in these households. The mother—for we will suppose the husband has

* Present vol., p. 664, under the heading "Paris Exhibition."

duties away from home—is frequently obliged to go out in all weathers and use what little skill she may have in buying; she has to see that her servant keeps a proper fire—or, perhaps, she has no servant—and then there is the cooking. Valuable time is thus expended —often extending over hours—which might be spent in earning money; and children are neglected at a time of life when they most require watching.

If we could send round to these thousands of families, and those even of a better grade, dinners ready prepared, and at the lowest remunerative rate, we should open the way to a great deal of good. Buying on a large scale, with experienced buyers, and in the cheapest markets, and wasting nothing because of the magnitude of the operations, we could afford to supply at a very cheap rate. We should want horses, but at Glasgow they require dining-rooms, condiments, table-cloths, cutlery, and waiters.

The waste in small families is (in the aggregate) enormous. A little lemon-peel is wanted, and so an entire lemon is purchased; a little of everything, all of which is not used. They have to encounter adulteration, and fraudulent weights and measures. Day after day the cold joint makes its appearance, and if it is considered economical, it is only so because the family eat cold meat very sparingly, for few people in our London atmosphere and life have the strength to get on with it. One-half the confined boxes called safes, situated close to water-closets and drains at the backs of small houses, are not fit for storing cold joints and other food. Many people have no safes at all. The husband often goes out or stays out, and dines elsewhere, reducing the allowance that can be made for the family dinner, but he says he must keep up his strength. Many a man paying 2s. for his steak and stout in the City, would rather put the 2s. to the family dinner, if such a thing was to be got; but, on the tables of the classes I refer to, Sunday only is the day when a hot dinner of average goodness is seen, and this because of the trouble (in one way or other) of getting it. Or, if the husband gets a holiday and dines at home, he finds that the wife is knocked up and ill, red in the face and cross with her labours, and with no strength nor appetite by the time she has prepared the dinner, which in most cases she cannot trust her one maid to get ready.

Perhaps the one drudge sends up the dearly-purchased joint with half the gravy missing. A little reflection will show the waste, loss of time, vexation, hurry, confusion, bell-ringing of greengrocer, butcher, and others, consequent on the dinner that must be got somehow. The poor professional engraver, artist, draughtsman, copyist —has all the children on his hands,—in his room, because the mistress and her servant are busy as Macbeth's witches (in the kitchen) over the cauldron. This breaks his labours for the day, and has been the ruin of families.

"For want of a nail the shoe was lost."

It is proposed, then, to try and remedy this in a very obvious manner, viz., to cook plain food on a large scale by some one of the fuel-saving apparatus, now well understood. With a tithe of the coal now used in ordinary kitchens, we have seen (thanks to Mr. George Warriner, late Instructor in Cookery at Aldershott), dinners for 2,500 men prepared in—not baking, but roasting-ovens, at the Tower o London. The cleanliness and excellence of the result seemed to leave nothing to be desired.

We propose by some such apparatus to roast, boil, and bake—meat, vegetables, and puddings of a plain description,—to have the meat carved from the joints by fair and skilful carvers,—to have it weighed by assistants alongside, by porcelain-fitted weighing apparatus, and then placed, with gravy, in say 2 lb., 4 lb., and 6 lb. tin cases (lined with pure tin), or in covered cylindrical jars. These covered jars (or cylinders), or tinned vessels, are at once to be placed hot, in hot japanned-iron cases, or cupboards, mounted on a tramway in a room. These cases to be four or five feet square, and about two feet six inches high. Each of these large cases forms the separated interior of a cart, about the size of an ordinary Parcels Delivery cart, if that is a convenient size. Loaded in a room of high temperature, with jars or canisters of food at 212°, they are then slid along the tramway-bench into the cart itself,—sliding into the cart just as a drawer is passed into a chest of drawers, only that the japanned iron case is open from the back, like the so-called "pigeon-hole" furniture, used for letters and documents. The cart into which the said iron case is slid, may be of wood lined with felt. The horse and cart are backed up to the tramway, and attached to the tramway by a bolt while this is being done. The carts thus loaded, and closed behind by a panel in which are as many doors as there are compartments, is now driven off to deliver the goods. Note,—that by having separate doors in the back part of our cart, we shall never expose all the compartments of jars to the cold air at one time. The hind panel of the cart, with its doors, would be felt-packed. The driver is in front. The conductor stands behind, and has with him, hanging on the rear of his cart in a weather-proof cover, and arranged in order by the office clerks, the lists or forms of the addresses of customers, and specifying the things to be delivered at each house. These forms he compares with the tickets given up by the house occupiers when the food is delivered to them.

The tickets (held by the public) are previously purchased from agents selected from tradespeople of the respective neighbourhoods, just as district offices are selected by the Parcels Delivery Company.

These tickets might be in printed form, in books about fourteen inches long and five inches wide; each page divided into three similar forms; each form to contain a printed list of food supplied, with number, date, room for the address of purchaser, agent's name, and ruled-off spaces which only require to be filled up with figures at the time of ordering, under suitable headings of each size of canister or jar. (See form annexed. It gives a rough idea of the principle.)

TO THE HEAD-QUARTERS, MOORGATE-STREET, OF THE HOT PROVISIONS DELIVERY COMPANY.

Order taken Nov. 14, 1867.

FARE FOR CHOICE.	Cases.		
	2 lb.	4 lb.	6 lb.
Roast beef	1		
Mutton		1	1
Potatoes	1	1	
Greens	1	1	
Plum pudding			1
Rice		1	

Number 147.
Office 11.

Please deliver the above to
Mr. S. Smith,
10, Guildford-street.

To be delivered
Nov. 18th, 1867.

John Giles, agent,
West-street.

The agent fills in the figures, address of buyer, dates, and signature. Probably he will not be allowed to sell less than six tickets. Each page of his printed book is a ticket. One-third is given to the buyer, one-third is sent to head-quarters, and one-third remains in the agent's book. In taking six tickets, then, it will be seen that the thirds of six pages are given to the buyer. If all the six dinners (or any number) ordered are alike, the first ticket only need be filled in in full by the agent. The buyer of the tickets will give them up

day by day to the conductors of the carts (when they call with the food), who will file them on a file on the top of his cart, and under shelter. He will return them at head-quarters as vouchers of delivery. The portion of the page of the book sent to head-quarters by the district agents will enable the secretary's clerks to compile the demands on the commissariat stores, and the kitchen generally.

This system might be much improved.

The kitchen superintendent will receive draught-lists, and will get his clerks to fill up printed draughts on the purveyors of the raw material—uncooked provisions. There will be check and counter-check, to ensure precision; and, indeed, I may suggest that a military sort of exactness, trim, and fitness of apparatus, cleanliness and neatness throughout, will be indispensable, and is easy if rules are rigidly laid down at first.

It is recommended that the buyers of dinner tickets be furnished by the district agents with boxes on the Swedish caloric retaining principle, into which the jars, when delivered from the carts, can be at once placed. Felt is about a penny or three half-pence a foot. It is alleged that in these wadded cases the food will keep hot for hours. Even one of the tea-pot covers recently introduced might suffice.

Any number of hot cases, or closets, might be filled with jars, despatched in a large, closed, furniture sort of van, with despatch across the metropolis, and then shifted from it and mounted on cart frames with the horses attached, miles away from the kitchens.

'Returned empties' may be called for each morning by carts, passed into the scalding-room, inverted, and placed on drainers.

The carving, weighing, and filling-in room may have wooden racks, in which, early each morning, shall be placed the jars or canisters only of the particular days' issue, according to the lists furnished by a clerk.

The puddings may be mixed by machine.

The building in which these several operations of storing, trimming, cooking, carving, and issue would take place, with the requisite offices, should, by preference, be a long structure, glazed in one wall from one end to the other, so that the public might freely inspect what was going on. Under restrictions, they should have free access to see, and to get information. Sausages would be eaten by people who never touch them, if they knew all about them, and had no reason to doubt. We are left in doubt about Dorset butter, now that the *Times'* correspondent says it is rancid butter mitigated by hog's lard. Is all the fruit sound used in the jam trade? Is mineral acid used for pickling? Is beer from the tavern pure? Is cheese reddened by carrot, and gin enlivened by cayenne? Not a tenth of the mustard sold is pure, I have excellent reason to believe. Would not such a project as this, if open as the day (as all things ought to be), assist in the health of the people? Many servants—this *en passant*—are not over clean. On a large scale of our operations cleanliness could be insured. At the risk of being prolix I will say that there is no reason why a factory of the sort our building should be, should not be as clean as a man-of-war. The public, our customers, would have a right to see, and unless they did so we should not soon get their confidence.

The remains of provisions might be sold to the soup-kitchens of the poor, or, if it could be afforded, it might well be a donation for this purpose.

It is believed that if this undertaking were carried out in a respectable manner, and on a sufficient scale, great public economy of fuel and of food would be the result. But, if time is money, there would be a saving in money in thousands of households, for the better education, nursing, or general care of children, time to take them out for air and exercise, which London children don't get enough of, time for duties of washing, mending, clothes-making, sewing-machine work, and self-culture or relaxation.

If this project is executed, may we most confidently predict that many houses will be rendered happier, healthier, and morally better?

The project could not be kept too simple at first. The Glasgow system is a paying system. The good it must do is immense. Doubtless, at Glasgow, a great deal may be learnt in furtherance of this project, but I would at first be content with a much less variety of food for this project than is given there, or it might not pay.

I have had much to do practically with manufactories and processes, and a very slight alteration, I need hardly say, will sometimes require expenses and alterations all the way through an elaborate organization, even to the printing.

But, simply as we might commence, I see no reason why, eventually, a sort of portable (mobilised) civil commissariat should not become an institution of the country (and a better one than "Watling's Pork-pies," though that is good), even to feeding volunteers on distant review-fields, or gangs of thousands of sturdy navvies, with the aliment which is their strength.

Eventually, we might hope that soup might be provided for the poor, and delivered in the poorest districts in common earthern jars carried in carts; and the system of what I have (perhaps erroneously) denominated "civil commissiarat" might extend upwards, so that at one-half Ring and Brymer's or Gunter's prices elaborate dishes of French or other cookery might find a large sale—the demand arising from the reduction of price, and the public becoming used to our system.

To go to the other end of the scale, one word about the very poor. In the depth of winter in London, as early as the dawn, I think it would be a great boon if oatmeal porridge could be delivered to the poor for a little over cost price. The bread and rank butter, and the chicory mixture, called coffee, sold at the stalls, is not a comforting meal compared with porridge made of Scotch coarse oatmeal, milk, water, and molasses, or coarse sugar. The porridge can be made in ten minutes. Children devour it with avidity. In the casual wards it is preferred—according to the testimony of the newspapers. Seven pounds of oatmeal cost about a shilling, and, with the other ingredients, hot penny rations might be sold, for the want of which hot meal thousands sink under calamity. Peas soup is an excellent thing, but hardly a suitable meal to begin a day on, and especially for those suffering from extreme debility and disease, and who are not so much less human than ourselves as some of us seem to imagine.

I will conclude this with one remark, which must be obvious in its truth:—if we wish in these troubled times to prevent political agitation on the part of the people—the great *unfed* as well as the great *unwashed*—we cannot do better than assist them to hot food with the money they earn. Millions of people are almost homeless. There are other Arabs than those of the sandy desert. To feed the people wisely is a matter worthy of Reformers who wish to promote content. A man, like a hungry child, will not cry out when he is filled. To feed the people is to promote good government and the cause of Order.—I am, &c., W. RIDDLE.

10, Larkhall-lane, S., November 9th, 1867.

PARIS EXHIBITION.

Now that the Exhibition is closed, and the general results are pretty well known, it is natural that comparisons should be made between this and the former universal exhibition held in Paris; from such a comparative report, which, though not official, is, we believe, correct, we extract the following memoranda:—

The Exhibition of 1855 occupied 152,052 square mètres of space, of which 18,726 were uncovered; the number of exhibitors amounted to 2,175 in fine arts, and 21,779 in agriculture and manufactures; the value of the entire contents of the Exhibition was estimated at 75,000,000 francs (£3,000,000); the expenses amounted to 11,336,522

francs, and the sum received for tickets and admissions to 3,202,485 francs.

The space occupied by the Exhibition of 1867, not including the annex of Billancourt, was forty-four hectares, equal to about 110 English acres, of which the main building covered 148,990 square mètres, or very nearly as much as the whole of the ground covered by the former Exhibition and its annexes; the number of exhibitors was double that of 1855, including 3,721 in the fine art sections alone. The expenses are taken at the original estimate of twenty millions of francs (£800,000), and the receipts at half that sum. It may be mentioned that the means for carrying out the Exhibition were subscribed in the following manner:—Six millions of francs by the government, six millions by the state, and eight millions guaranteed by an association, whose subscriptions are said to have amounted to more than ten millions. The total number of persons, French and foreign, who visited the Exhibition, is stated at twelve millions, but as it was quite impossible to tell how many visits each person made, this total, if correct, must represent not the actual number of persons but of visits to the Exhibition.

According to report, there is a considerable balance in favour of the account of the Exhibition, but as several claims are yet undecided, the announcement of any positive sum must, at least, be premature.

PARIS CENTRAL SCHOOL OF ARCHITECTURE.

This is the youngest of the new schools established in Paris for technical education; it was opened in November, 1865. It was founded by a society, under the new law of limited responsibility, with a capital equivalent to the sum of £16,000, and therefore, although having the support of the Ministers of Public Instruction and of the Beaux Arts and other authorities, is, in fact, a private institution. The school is situated in the Rue d'Enfer, in what was formerly the Hôtel de Chaulnes. The number of pupils admitted at the opening was 54, and in consequence, apparently, of the greater strictness exercised, the number was not increased in the following year; the third session commenced with 78 pupils.

The following extracts from the printed *Programme des conditions* will indicate the constitution and system of the establishment:—

"The school is open to foreigners as well as natives. The fee for the annual course is 850 francs (£34), payable in three instalments, namely, 400 fr. on admission, 225 fr. on the 10th of February, and the remainder on the 10th of May following. In addition to this each pupil is bound to deposit 40 fr., to cover any losses or injury occasioned by his fault. The examination for admission may take place, at the desire of the candidate, either at the school itself, in a provincial town, or before a professor of a foreign university. Each pupil must provide himself with drawing instruments, boards, portfolios, and colours. Those pupils who, in the course of instruction, do not exhibit sufficient aptitude or assiduity for success, are not allowed to continue in the school; and during the first year 19 out of the 54 youths admitted were found incompetent.

Candidates for admission, if examined in Paris, are required to send in a drawing of an ornament in bas-relief; the plan, section, and elevation of a building; and a written composition; these are replaced, in the case of provincials or foreigners, by certificates of local architects. In all cases the candidates are examined orally in the following branches of knowledge:—Arithmetic, including fractions, decimals, the metrical system, roots and powers; algebra, including simple equations, negative quantities, the symbols $\frac{o}{o}$, $\infty \times o$, $\frac{m}{o}$, roots and powers of algebraic expressions, radicals of the second degree, and equations of the second degree, and questions relating to compound interest and annuities; geometry, plane and spherical, with problems; trigonometry; descriptive geometry, conic sections, curved surfaces, and plane sections; geography, distribution of sea and land, zones, elements of ethnography, political geography of Asia, explaining the revolutions which have successively changed the geography of China, Tartary, India, the Greek and Mussulman dominations in India, the Assyrian, Persian, Macedonian, Roman, Arab, and Ottoman empires in Western Asia, Phœnicia, Judea, and Egypt; political geography of Europe; revolutions which have changed the distribution of nationalities in the West; maps of Greece and of her colonies in the time of Pericles, of the empire of Alexander, of the Roman empire under Augustus, and of the empire of Charlemagne; Mussulman domination during the khalifat of Cordova; and, lastly, Europe in 1453, 1648, and 1865. In addition to all this those candidates who have already made some progress in architectural studies are invited to submit their drawings or compositions to the examiners, who will take them into consideration as evidence of capacity.

It will be seen that the above requirements are severe, the object of the school being to supply a sound practical training, in place, or rather in aid of, existing institutions, which teach little more than the artistic portion of an architect's education.

The Minister of the Beaux Arts has created four scholarships and four half-scholarships to be competed for by the pupils of the school; the Princess Mathilde and M. Caubert have founded annual prizes, and the ministers, architects, and publishers have made donations of technical publications, which are valued at £340.

During the last session a petition was presented to the Senate in favour of official diplomas for architects; the commission appointed to inquire into the subject decided against the views entertained in the petition, and in favour of the freedom of architecture, and called attention to the new school in the following terms:—"A school bearing the title of the Central School of Architecture was formed two years since; it is based upon the plan of the Central School of Arts and Manufactures, which was created 36 years before, for the training of civil engineers, and which now occupies so important a position in the scientific world. The new school is intended to form architects who study their art in a serious manner, and offers the guarantees which the petitioner asks for.

This school may be said to complete the series of establishments for technical education for which Paris has so long been celebrated.

The inaugural meeting of the session 1867-8 took place on the 11th instant, under the presidency of Henry Cole, Esq., C.B. Mr. Cole attributed the honour which had been conferred upon him, of presiding at the meeting, to the existence of a certain analogy between the Paris School and the Kensington Museum; the latter putting into practice the principles taught at the former. After touching upon the question of construction and ornamentation, Mr. Cole said:—The arrangements of a public museum differ from those of a religious temple, be it Egyptian, Greek, or Roman; they differ from those of a cathedral or church, reformed or not reformed; they are not those of a fortress, of a crenelated tower, of an imperial palace, or of a feudal castle. A museum is a kind of modern socialist building, where the level is the same for all; there is neither dais nor reserved places, and the architecture of past times aids us but little. Mr. Cole then referred to the fact that the specimens in brick and terra-cotta, illustrative of the new buildings at Kensington, lately exhibited in the Champ de Mars, had been presented to the Conservatoire des Arts-et-Metiers, and would be erected in the garden of that establishment. The architecture of our day, said Mr. Cole, is not studied in cloisters, for the erection of cathedrals, fortresses for nobles, or numerous palaces for kings; it is required to supply the wants of a civilized democracy all over the world, and can only make progress by relying on common sense, directed by science and inspired by art;

therefore to this task architecture ought to apply in all humility. Mr. Cole concluded with the announcement that he had asked and obtained permission to offer a prize to be awarded to the most efficient pupil of the school in figure drawing.

COMMERCIAL SCHOOL OF PARIS.

The commercial school, founded by the Chamber of Commerce of Paris, with the aid of the Ministry of Public Instruction, of which the annual distribution of prizes took place not long since, is a novel establishment, which deserves attention. The view of the Council of the Chamber of Commerce in establishing this school is thus expressed in a printed circular:—"Seeing the development of international relations caused by railways, navigation, telegraphic communications, and new treaties, the Chamber felt that it would be well to found a school, in which youths should be prepared for the various careers of commerce." The period of study is fixed at three years, with a fourth year for improvement; and the course comprehends—moral and religious training, the ordinary elements of education, commercial geography and history, technology, book-keeping, exchange, foreign moneys, weights and measures, commercial correspondence, commercial law, the English, German, and Spanish languages, and drawing. The school is open from eight in the morning till five in the evening, and pupils, who are all out-door scholars, are received from the age of twelve years, and after passing a satisfactory examination in elementary education. Lads under twelve may, however, be admitted to a preparatory course of study in the school. Each scholar pays twenty francs (16s.) per month, in advance, which covers all expenses, with the single exception of books. At the end of the third year of study pupils are examined, and, if qualified, receive certificates of capacity; and at the end of the fourth year the Chamber of Commerce delivers diplomas to those scholars who have given proofs, during that year, of real information and solid instruction; so that, in fact, the school awards two grades of degrees. At the late distribution six pupils received diplomas and quitted the school, and eleven others obtained certificates at the expiration of the ordinary course of three years, and a considerable number of prizes were awarded to junior scholars. Amongst the special prizes was the two prix d'honneur, given by the Minister of Public Instruction and the Chamber of Commerce; a third year prize of excellence, and a special prize for book-keeping and accounts, offered by the Chambre Syndicale, of Paris. The number of pupils to whom honours were awarded exceeded thirty, and, considering that the establishment is only five years old, such a result promises well for the school.

Fine Arts.

ADDITIONS TO THE NATIONAL GALLERY.—During the vacation interesting and important additions have been made to our National Gallery. Eleven pictures have been acquired from the private collection of Sir Charles Eastlake, made while he was director of the gallery. One of these, a unique production of an artist known all but exclusively as a medallist, has been generously presented by Lady Eastlake. The valuable picture thus acquired, "St. Anthony and St. George," by Pisano, bears on the frame the following inscription:—"Presented to the National Gallery, August, 1867, by Lady Eastlake, in memory of Sir Charles Eastlake, P.R.A., first director of this Gallery." Pisano was a painter of the Veronese school, and belonging to the first half of the fifteenth century, his style is essentially pre-Raphaelite. The work is delicate in handling as in colour; it is finished as a miniature; gold is used on an embossed surface, as in other pictures by archaic masters of northern Italy. These additions to the gallery belong rather to the early than to the middle or late epochs in Italian art; and they are of special value as giving still greater completeness to our national collection of rare pre-Raphaelite masters, through whom may be traced step by step sustained historic progress in the art of painting. There is a curiously interesting picture by Bono, pupil of the aforesaid Pisano; as late as 1461 this painter was engaged in the Cathedral of Siena, that museum of the middle ages. The subject of the picture is "St. Jerome in the Desert;" in its treatment may be observed a certain German detail, dryness, and literalness, not unfrequently found in the early masters of Northern Italy. The scarce school of Ferrara receives further elucidation in a portrait, striking for individuality, by Giovanui Oriolo. Yet another quattrocento painter of Ferrara, Cosimo Tura, still more amplifies a collection already rich. Mr. Wornum, in his "Epochs," designates Tura as "the Mantegna of Ferrara." The artist succeeded, as court painter, Piero della Francesca, of whom our gallery contains a magnificent example. Tura's "St. Jerome" is hard and dry; the figure, as frequently in these tentative northern schools, suffers as from emaciation of flesh. The second picture by this rare master is among the most attractive of the recent acquisitions; the subject, "The Madonna and Child," has received unusual amplification in a company of saints, playing on violins, &c. We now pass to another school—that of Venice in pre-Titian times. In the Venetian Academy there are few works of more interest, not to say singularity, than those which come from Murano, the island of glass manufacture celebrity. Among the collection in the Venetian Academy may be remembered pictures by Bartolommeo and Antonio Vivarini. Our National Gallery previously possessed a picture by the former; it now receives a production of the other brother, Antonio. In treatment the panel displays the detail, realism, and individual truth which belong to the nascent school of Venice. It is also signalised by the rich harmony of colour which from first to last marks the Venetian manner. In Mr. Wornum's "Epochs" will be found a just estimate of the works of the Brothers Vivarini, the famed painters of Murano. In Mrs. Jameson's "Memoirs of Italian Painters" is found the following passage:—"In the Island of Murano, at Venice, dwelt a family called the Vivarini, who had carried on the art of painting from generation to generation, and who had associated with them some of the early Flemings, thus it was that the painters of the first Venetian school became familiarised with a style of colouring more rich and vivid than was practised in any other part of Italy, and they were among the first who substituted oil painting for distemper." Yet the pictures of the Vivarini still adhere to the older method; indeed, all the works we have hitherto enumerated are in tempera or distemper on wood. It is not, however, on casual view very easy to distinguish between oil and tempera, because the tempera surface has usually received for protection varnish or some glossy coat. Yet another school of the quattrocento—that of Umbria—receives illustration in a picture of "St. Michael and the Dragon," by the Dominican friar, Fra Carnovale. The figure of the saint, which is nearly life-size, and drawn with a firm outline, has the smoothness, delicacy, and tenderness which mark this spiritual school of Umbria. We pass from easel to mural and fresco painting in two heads by Domenico Veneziano, who, nevertheless, ranks as one of the first painters in oil known in Italy; but the handling of these heads is manifestly that of fresco, yet, as often happens, the surface has lost its original aspect by preparations used to preserve the work from destruction. The number of frescoes that have reached England is necessarily small, and these two rare specimens of the process have value on many grounds. Again, we pass to another school, or

rather to another nationality, in an extremely choice panel picture by Vander Goes, of Ghent, a scholar and imitator of John Van Eyck, an artist who enjoyed a great reputation in the latter half of the fourteenth century. His works are scarce. Specially to be admired is the colour and the technical excellence of material and execution thus early perfected in Flanders. The pigments are unchanged and immovable as when first painted. This master-piece hangs as a pendant to the exquisite Memling already possessed by the Gallery. Furthermore, our all but unexampled collection of the works of Rembrandt receives a most important addition in "The Portrait of an Old Lady." This is one of the master's strongest and most characteristic heads; the paint is powerful in impasto, yet liquid. The master's oft-tried opposition between black dress, white frill, and rich-toned flesh has been turned to the utmost account. The head is amazing for individual character. We may, in conclusion, observe on the apparition among the old masters of Reynolds' portrait of Lord Heathfield. It is satisfactory to see how England's great colourist holds his own in competition with Rubens and Moroni. Gainsborough, under like trial, wins equal victory; that master work in landscape art, "The Watering Place," recently removed from Kensington, absolutely gains by juxtaposition with Claude and Poussin.

Manufactures.

FEAT OF A SHEFFIELD FILE MAKER.—The *Ironmonger* records that a few weeks since a file 19 in. long, 8 in. wide, and 1 in. thick, was cut at Messrs. Samuel Newbould and Co.'s, Bridgefield Works, Sheffield. The chisel used in cutting it was upwards of 12 in. in length, and had been made and was held by Samuel Brooks. The striker, with a hammer 22 lb. weight, was Richard Wilson, and not a foul stroke was given. The file is rough on one side, and bastard-cut on the other. Not one of the workmen, except the cutter, could be found to say that it was possible to cut so large a file in one row; but the success was most complete. The file was admired on account of its perfect truth and level. The novelty in the file is this, that, instead of being over-cut and up-cut in rows, one row suffices for over-cutting and one for the up-cut. It is, consequently, truer than it could have been by the other process.

FISH-HOOK MACHINERY.—The *New York Tribune* says:—"At New Haven, Connecticut, we were lately taken to a building in which some scores of men and women were making fish-hooks of various sizes, with machinery invented by Dr. C. O. Crosby, of that city. Into each of the machines, wire of a given size was rapidly passing from a reel, fashioned somewhat like the 'swifts' of our Yankee grandmothers, and being automatically cut into the requisite lengths, bent, flattened at one end, sharpened to a point at the other, bearded and dropped into a box under the machine, needing only to be tempered to make them as perfect, efficient fish-hooks as were ever seen—a single workman thus making 60,000 fish-hooks in a day of ten hours. We said he makes them, but that is inaccurate; he supplies the wire, and then looks on while the machine makes them, without a fault or a possibility of defect, as fast as shingle nails can be made, and equal to any ever used. That they are cheaper than any other need hardly be added. Hitherto we Americans have fished with British-made hooks; but that day is over. The European hooks have till now been made by hand—slowly, clumsily, expensively. We read recently in *The Working Man* (British) an account of the fish-hook manufacture in England, which seems, in the light of what we saw in New Haven, the description of some antediluvian process, invented by Tubal Cain. The wire is first cut by shears, then heated, then rubbed, then bearded, then pointed by filing, then bent, then shanked, then scoured, then blued or japanned, when they are ready to be counted, papered, and labelled. Each of this is a distinct manual process; and the aggregate cost (not including the material) must be ten times that of making by the automatic Crosby process."

Commerce.

THE CHAMBERS OF COMMERCE OF FRANCE.—An incident has just occurred which can scarcely fail to have some beneficial effect on the commerce of France, and, indeed, of Europe; the Chamber of Commerce of Rouen addressed a circular to the other Chambers with the view of establishing full inquiry into the condition and wants of the commercial world, and received cordial replies to its applications from all sides, and which were published in the *Journal de Rouen*, with the view to draw forth more facts respecting the financial and commercial condition of the country. But it appeared, by an official warning given to the Rouen Chamber, that there exists a ministerial injunction, bearing date 1806, against the interchange of communication between Chambers of Commerce; and that, therefore, the publication of any such documents could not be permitted. The prohibition in question has naturally given rise to many comments, and it is scarcely to be doubted that a Government which has done so much for the improvement of industry and commerce will take the necessary measures not only to remove the prohibition in question, but also to aid the Chambers in collecting and promulgating all the facts and evidences which may be useful in solving commercial questions, and aiding the great industries of the country. This old prohibition may then be converted into a valuable instrument of commercial reform.

Colonies.

STATISTICS OF TASMANIA.—The estimated population of the colony was 97,368 on 31st December, 1866, showing an increase of 2,167 during the year. The general revenue receipts for the year were £245,421, and the expenditure £245,361 7s. 6d. The territorial receipts amounted to £88,342, and the expenditure was £106,740. The commissariat expenditure was £56,460. The total value of the exports was £834,606, against £880,965 in the previous year; and the value of the imports £942,107, against £762,375 in the preceding year. There were 643 vessels, with a tonnage of 10,793 tons, entered inwards, or an increase of 7,627 tons over last year. There are 11 steamers, of a tonnage of 2,944 tons, and 200 vessels, with a burden of 16,825 tons, belonging to the ports of Launceston and Hobart Town. Nine vessels were employed in the whale fishery, and the quantity of oil taken was 380 tons, valued at £38,000. In the year 1866 the quantity of land sold was 61,368 acres, realising £35,623; at the end of the year 2,251,071 acres were held under depasturing licenses, at a rental of £9,303 per annum. The total quantity of land in a state of cultivation was 279,022 acres, of which 111,156 acres were not under crop. The total acreage under wheat was 71,348; oats, 34,358; peas, 3,655; potatoes, 10,820; barley, 4,596; hay, 33,762; tobacco, 216. There is a large increase in oats, peas, potatoes, and tobacco. The total number of horned cattle in the colony was 88,370, 21,567 horses, 1,722,804 sheep, 2,486 goats, and 33,259 pigs.

THE IMPORTS OF AUSTRALIAN WOOL have increased very largely again this year, having attained an aggregate in the four months ended 30th April, of 32,708,929 lbs., against 21,934,222 lbs. in the corresponding period of 1866. In 1866 the total quantity of wool imported

was 113,772,694 lbs., against 109,734,261 lbs. in 1865; 59,166,616 lbs. in 1860, 47,489,650 lbs. in 1854, and 30,034,567 lbs. in 1848, so that in 20 years the imports of Australian wool have thus increased more than fourfold.

Notes.

CLEANING PRINTING TYPE.—The cleaning of metal type, and still more of wood blocks, is a matter of very great importance, not only as regards the good printing, but especially as respects the preservation of the blocks. M. Leblanc Hardel, a printer, of Caen, complained to a chemist, M. Guerard Deslauriers, of the ill-effects of turpentine, and that gentleman, after having made experiments, recommended the use of an essence of petroleum. The advice was followed, and after eighteen months' experience, the report is, that the petroleum, volatilizing rapidly, does not gum up the type, in fact leaves nothing on the face of the metal but a little white powder which is easily removed by means of a soft brush—that it does not injure blocks, has no effect in opening the pores of the wood, but on the contrary hardens the surface, renders the face of the wood peculiarly smooth and consequently increases the fineness of the work produced—lastly, the cost of the petroleum is less than half that of turpentine, and the rapidity with which it dries allows the forms to be washed without removing them from the press or machine.

NEW METHOD OF FEEDING SHEEP.—A grazier in the Pas de Calais, named Pentefort, has introduced the following novel and clever method of economising his green crops: he places on the ground a rack or fence across the whole field, and the sheep feed between the bars. When the animals have consumed all the herbage within their reach, the rack is moved forward so as to give them a fresh supply of forage. Of course, the rack is so made that the sheep cannot jump over it. It is evident that regularity in cropping and in the distribution of the manure, as well as great economy, must be the result of this novel system.

SCHOOL OF MINING AT ST. ETIENNE.—The Minister of Agriculture, Commerce, and Public Works has just issued a new programme for this useful school, the conditions contained therein to come into force next session. The subjects required from candidates for admission are—the French language, arithmetic, geometry, algebra, rectilineal trigonometry, and descriptive geometry, the same as are required for the examination of a bachelor in science, with the exception of metallurgy, the elements of linear design, and ordinary drawing, and the execution of problems in descriptive geometry. Candidates are received between the ages of sixteen and twenty-five, but soldiers and sailors, who have served their time in the army or navy, are admitted up to the age of twenty-eight. Previous to the examination for admission to the school, candidates are required to undergo a preliminary examination before an engineer of mines, or of roads and bridges, except in the case of pupils of the Polytechnic School who have taken a second-class degree.

GREAT BALLOON AT THE CHAMP DE MARS.—The fine balloon constructed by M. Giffard, and to be seen at M. Flond's machine works, just without the limits of the International Exhibition, is attracting great attention, both in the scientific and fashionable world. The object of M. Giffard is to obtain a balloon capable of carrying a considerable weight, entirely under control, and able, if necessary, to remain in air during fifteen days or more. These desiderata are attained by the use of a peculiar material in the construction of the balloon itself, of pure hydrogen gas, and of powerful machinery, by means of which the balloon is rendered captive, and drawn down to earth at pleasure. It is said that the construction of the balloon is so perfect, that the loss of gas is reduced to an insignificant quantity. The contents of the balloon are equal to five thousand cubic mètres; its car carries thirteen persons, besides the two aeronauts, and it is attached to a steam-engine by means of a cable three hundred mètres in length; the ascent and descent only occupies about ten minutes, and it makes thirty or forty voyages a day. The object of M. Giffard is scientific experiment, and especially with regard to the electrical phenomena of the atmosphere; the present ascents are merely preparatory, and with a view to obtain funds for future serious undertakings; many ladies, including the Empress, have made the ascent, and, with one exception, we have never heard of any terror being felt. The wind, of course, causes the balloon to deviate at times considerably from the straight line, but the steam machinery has it in complete command, and the movements of the gigantic pear-shaped body are singularly majestic.

SANITARY MEASURES AT HAVRE.—Since the establishment of a regular line of steamers between Havre and the United States, the Government has occupied itself constantly with the means of securing the town against the invasions of cholera, yellow fever, and other epidemics. At present every vessel that enters Havre is placed under the inspection of an officer of health, and any vessel having had deaths on board during her passage, or having any sick on board, is sent to quarantine at the lazaretto of Tatihou, in the Manche; the former of these precautions is, however, deemed insufficient, and the latter objectionable, especially in the winter season, as causing the sick to be submitted to an extra sea voyage, and the dangers of a difficult navigation. The subject having been inquired into it has been determined to create at Havre a sanitary establishment, like those which exist at Marseilles, and at the mouths of the Gironde and of the Loire. A large lazaretto is to be formed, but, pending the consideration of two proposed sites, a small establishment is at once to be prepared for the reception of passengers who cannot be at once admitted to free pratique. The lazaretto will consist of two parts, one for the sick and the other for those who are simply under the observation of the sanitary officers. The cost of this temporary place of quarantine is estimated at less than £3,000, and it is ordered to be carried into execution without delay.

MEETINGS FOR THE ENSUING WEEK.

MON.....Entomological, 7.
TUES ...Anthropological, 8.
Statistical, 8. Mr. Hyde Clarke, "On Public Instruction in Turkey."
Civil Engineers, 8. Renewed Discussion upon Mr. Byrne's paper, "On the Removal of Organic and Inorganic Substances in Water."
WED ...Society of Arts, 8. Opening Address by the Chairman of Council.
Geological, 8. 1. Mr. N. Whitley, "On supposed Glacial markings in the Valley of the Exe." 2. Mr. S. V. Wood, jun., and the Rev. J. L. Rome, "On the Glacial and post-Glacial Structure of Lincolnshire and S.E. Yorkshire." 3. Mr. A. B. Wynne, "On Disturbance of the Level of the Land near Youghal."
THUR ...Linnæan, 8. 1. Dr. Hance, "On Chinese *Corylaceæ*." 2. Mr. Scott, "On *Isoetes capsularis*, R."
FRI .....Quekett Microscopical Club, 8.

Patents.

From Commissioners of Patents' Journal, November 8th.

GRANTS OF PROVISIONAL PROTECTION.

Air-compressing apparatus—2978—F. Seiler.
Alumina—2952—W. Crossley and T. C. Hutchinson.
Balloons—3036—M. Henry.
Boats, facilitating, ascending and descending rivers, &c.—3040—V. Cresalles.
Boilers—3000—W. and D. Fisken.
Boilers, &c., heating water for—2773—J. H. Nelson and T. Briggs.
Bolts and nuts—2954—C. D. Abel.

Bolts and nuts, securing—3054—J. Maddocks.
Bottles, &c.—3018—L. Newton and T. Kershaw.
Bottles, vases, &c., ornamenting—2570—S. Brown.
Bottling apparatus—2994—S. Stackard.
Bread, &c., ozonized—2978—T. Welton.
Buffers, &c.—2992—J. Mitchell.
Buildings, &c., ventilating—2968—J. White.
Buildings, &c., ventilating—3060—A. V. Newton.
Cartridge cases—2958—C. Duncombe.
Cattle, &c., regulating the supply of food to—3010—P. Love.
Cocks or valves for discharging water, &c.—3004—H. Wilson.
Cornices, &c.—2938—F. W. Waide.
Cotton, &c., cleaning—3048—J. H. Johnson.
Croquet mallets—3024—J. Asser.
Fans for ventilating mines, &c.—2964—T. Lemielle.
Fibrous substances, spinning, &c.—2932—T. Whitehead.
File blanks—2972—W. Gray.
Files, cutting—2990—J. Dodge.
Furnaces—3042—E. B. Wilson.
Gas and coke—3032—J. Young.
Gaseliers, &c.—2970—H. W. Sambidge.
Hats and bonnets—2927—E. T. Hughes.
Horse ploughs—3052—W. H. A. Bowhay.
Hydrocarbons, &c., burning the gases arising from the distillation of liquid—3014—G. and E. Dorsett and J. B. Blythe.
Indicators—3012—J. A. Hopkinson and J. Hopkinson, jun.
Iron—2657—J. Hargreaves.
Knitting frames, circular—2628—H. M. Mellor.
Manures and disinfectants—2934—F. Gerhartz.
Meat, &c., preserving, curing, &c.—3006—W. R. Lake.
Metallic screws, moulds for making—3038—W. Potts.
Musical instruments—3044—J. Smyth and S. Kirby.
Printing from metal plates and lithographic stones—3034—A. J., W. B., and S. H. Waterlow.
Railway and other brakes—3026—A. M. Clark.
Railways—2955—J. Hunter.
Reaping and mowing machines—3022—C. E. Hall.
Rice, &c., decorticating—2916—T. Bell and J. Richardson.
Sewing machines—2962—T. Webb.
Shuttle tongues—2974—J. Haddock.
Spinning machinery—2996—J. H. Johnson.
Urine, &c., treatment of—2998—R. Weare.
Valves—2812—J. Goodfellow.
Valves—2854—J. Withinshaw and J. E. Baker.
Valves, &c.—2980—A. M. Clark.
Vegetable fibre, bleaching—2623—W. W. Burdon.
Webbing or gasket for packing, &c.—3046—J. T. Carter.
Wheat, &c., grinding—2930—T. Kitchen.
Wheels—2986—R. W. Thomson.
Window blinds, rollers for—3002—L. Stockman.
Wood, preparing—2904—W. E. Newton.
Yarns—2660—A. L. Dickins and H. Heywood.
Yeast, separating from liquid matters—2652—W. Hall.

PATENTS SEALED.

1379. R. Andrew.
1396. J. Reilly.
1400. J. Piddington.
1407. W. R. Lake.
1409. J. G. N. Alleyne.
1412. H. A. Bonneville.
1419. E. Field.
1424. B. Barrett & H. Mackenzie.
1537. C. E. Brooman.
1561. H. Frost and H. Frost, jun.
1603. C. E. Brooman.
1721. J. Millward.
2059. P. M. A. Laurent.
2330. C. E. Flower.
2520. A. V. Newton.
2600. W. E. Newton.

From Commissioners of Patents' Journal, November 12th.

PATENTS SEALED.

1408. G. A. Neumeyer.
1420. J. Clark.
1426. J. G. Jennings.
1427. A. M. Clark.
1428. E. Walker.
1430. J. C. Ellison.
1431. C. Brazil and R. Grime.
1432. H. C. Baildon.
1433. E. Smith.
1435. C. Perry.
1436. W. Clarke and E. Walker.
1443. E. Edwards.
1447. J. M. Napier.
1448. G. T. Bousfield.
1449. J. H. Johnson.
1454. J. M. Stanley.
1456. F. P. Warren.
1461. A. L. Dowie.
1466. G. Bernhardt.
1471. J. L. Clark.
1477. A. H. Brandon.
1494. H. Chamberlain.
1495. J. G. Tongue.
1512. J. Stenhouse & J. Duncan.
1521. W. J. Murphy.
1588. T. Mitchell.
1595. W. B. Ritchie and J. G. Willans.
1697. H. Rolle.
1776. P. Welch.
1805. J. Ward and F. Dressler.
1853. H. Veillon.
1879. W. R. Lake.
2075. F. D. Nuttall.
2189. T. Greener and W. Ellis.
2253. G. W. Dinsdale.
2694. C. D. Abel.

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

2740. J. Sullivan.
2741. J. Snider.
2764. W. B. Adams.
2771. W. K. Hall.
2832. G. E. Noone.
2940. L. Valant.
2773. J. H. Johnson.
2800. W. Willis.
2859. R. Allinson and H. Lea.
2794. J. McCall and B. G. Sloper.
2784. J. Thompson.
2785. J. Dale, H. Caro, and C. A. Martius.
2789. J. Robinson & J. Gresham.
2792. M. W. Ruthven.
2807. J. Kinniburgh.
2883. A. A. Croll.
2901. W. E. Newton.
2788. J. A. Manning.

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

2742. A. J. Sedley.
2771. H. E. West.

Registered Designs.

4890—October 12th—Boot-jack—C. Hull, Birmingham.
4891—October 15th—Part of a clybarn wrench—Wynn and Co., Birmingham.
4892—October 15th—The domestic washer—W. Spalding, Lincolnshire.
4893—October 16th—A portable gas stove—J. Wright, 16, Albion-street, Birmingham.
4894—October 17th—Bank note label—S. Stephens and Co., 2, Parliament-street, Dublin.
4895—October 18th—An improved foot-warmer—T. S. Hall, Truro.
4896—October 25th—An improved castor—E. Whalley and W. Jardine, Union-street, Blackburn.
4897—October 25th—Arm for mantel-piece banner screen—W. Tonks and Son, Birmingham.
4898—October 26th—A trousers' protector—J. White, High-street, Manchester.
4899—November 7th—A bedstead mount or top—Key and Hoskyns, Birmingham.
4900—November 7th—Calkins' writing desk for the blind—J. G. Calkins, Clayton-street, Kennington, S.
4901—November 8th—A heating apparatus for sewing machines—E. Waterman, Rupert-street, Bristol.
4902—November 11th—Self-acting window sash fastener—J. Trail and F. Gomm, 6, Norfolk-street, Mile-end-road, E.

LIST OF PRESENTS.

The following Presents have been made to the Society during the past year. The thanks of the Society have been forwarded to the Donors :—

PRESENTS.	DONORS.
Specifications of Patents up to the present time, and Indexes	Commissioners of Patents.
Abridgments of ditto	"
The Commissioners of Patents' Journal	"
Watts' Divine and Moral Songs, illustrated by the Graphotype Process	H. Fitz-Cook.
Catalogue of the Library of the Board of Trade, compiled by W. M. Bucknall	Compiler.
Essay on Trisection, with diagrams, by Joseph Seers	Author.
Treatise on Arithmetical Composition and Resolution, translated from the Latin by Mr. Raphson, 1720	Mr. Joseph Seers.
Annual Report of the Art-Union of London, 1866	
Photographs of the Restoration of Ratisbon Cathedral	Dr. Schubarth.
The Railway, Banking, Mining, Insurance, and Commercial Almanack for 1867	Editor.
The South Wales Gazetteer, 1866	New South Wales Government.
Comparisons of Standards of Length	Secretary of State for War.
Work on Textile Manufactures and Costumes of India, by Dr. Forbes Watson	Secretary of State for India.
Prof. Hofmann's Report on Chemical Laboratories of the Universities of Bonn and Berlin	Committee of Council on Education.
Transactions of the Royal Society of Victoria, 1865-6	Society.
Transactions of the Institution of Engineers in Scotland, 1865-6	Institution.
The Ocean Telegraph Cable, by W. Rowett	Author.
Symons's British Rainfall, 1866	"
Treatise on Watch Work, &c., by T. C. Scotchford	"
Statistics of New Zealand, 1865	Governor of New Zealand.
Translation of Correspondence between Saint Martin and Baron de Liebistorf, by E. Burton Penny	E. Burton Penny.
Man, his True Nature and Ministry, translated from the French of Louis Claude de Saint Martin, by E. Burton Penny	"
Catalogue of the Hebrew Books in the Library of the British Museum, by J. Winter Jones	Trustees.
Specimens of Typography, by Gaetano Nobile, Naples	G. Nobile.
Archæologia, or Miscellaneous Tracts relating to Antiquity, Vol. xl., Part 1	Soc. of Antiquaries.
Transactions of Royal Society of Edinburgh, 1865-6	Society.
Proceedings of " "	"
A New Idea for the Water Supply of Towns, by A. S. Ormsby	Author.
Transactions of the Institution of Naval Architects, 1866	Institution.
Debrett's Peerage for 1867	Publishers.
" Baronetage and Knightage for 1867	"
" House of Commons for 1867	"
Report on the Calcutta Cyclone	Meteorological Committee of Calcutta.
Catalogue of Sculpture, Paintings, Engravings, &c., belonging to the Corporation of the City of London	Town Clerk of London.
Official Record of the Intercolonial Exhibition of Australasia, 1866-67	J. P. Knight.
Transactions of the American Institute, New York, 1863-6	Institute.
Successful Oyster Culture, by Harry Lobb	Author.
The Educational Calendar and Scholastic Year Book for 1867	F. Marcus.
The Common Sense of English Orthography, by E. Jones	Author.
Management and Education of Blind Children, translated from the German by the Rev. W. Taylor, F.R.S.	Rev. W. Taylor.
Catalogue (English version) of the Paris Universal Exhibition of 1867. (55 copies for distribution among the artisans sent to Paris by the Society)	Messrs. J. M. Johnson and Sons.
Banca, and its Tin Stream Works, by P. Van Diest, translated from the Dutch by C. Le Neve Foster, B.A., D.Sc.	C. Le Neve Foster, B.A., D.Sc.
Memoirs of the Geological Survey of India, Vol. v., Parts 2 and 3	Geological Survey of India.
Do. do. (Palæontologia Indica), Parts 10-13, 3rd Series	"
Annual Report of do. for 1866	"
Catalogue of the Organic Remains of the Cephalopoda	"
Catalogue of the Meteorites	"
Reports on the Agricultural Exhibitions of Vienna and Aarhuus (Denmark), by Professor John Wilson, F.R.S.E.	Author.

PRESENTS.	DONORS.
On the proper form of Ships, by J. Bourne, C.E.	Author.
London Cabs: The "Course" System, as applied to London or any large City, by J. L. Haddan, C.E.	"
The Fouling and Corrosion of Iron Ships, their causes and means of prevention, by C. F. T. Young, C.E.	"
Remarks on the Administration and Defects of the Patent Laws, and the Inquiry of the Royal Commissioners, by Alexander Mann, M.A.	"
Chemical Notes for the Lecture Room, by Dr. Wood	"
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